Operation Reuse on Handheld Devices
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Abstract

Compilers have long used redundancy removal to improve program execution speed. For handheld devices, redundancy removal is particularly attractive because it improves execution speed and energy efficiency at the same time. In a broad view, redundancy exists in many different forms e.g., redundant computations and redundant branches. We briefly describe our recent efforts to expand the scope of redundancy removal. We attain *computation reuse* by replacing a code segment by a table loop-up. We use *IF-merging* to merge conditional statements into a single conditional statement. We present part of our preliminary experimental results from an HP/Compaq iPAQ PDA.